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United States Department of Agriculture,

WASHINGTON, D. C., *December 30, 1916.*

MONTHLY LIST OF PUBLICATIONS.

[DECEMBER, 1916.]

READ CAREFULLY BEFORE ORDERING.

A copy of any of the publications listed herein, except those otherwise noted, may be obtained free upon application to the Editor and Chief of the Division of Publications, United States Department of Agriculture, Washington, D. C., as long as the department's supply lasts.

After this department's supply is exhausted, publications can still be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., but by purchase only, and at the prices noted herein.

Send all remittances to the Superintendent of Documents direct. His office is not a part of the Department of Agriculture.

SPECIAL NOTICE.

Before mailing your request be sure and see that your name and complete post-office address (street number or rural route number as the case may be) is attached.

FARMERS' BULLETINS—FOR FREE DISTRIBUTION.

☞NOTE.—The department's supply of the current numbers of Farmers' Bulletins is ordinarily sufficient to make it possible to send them free to all applicants. They are also for sale at 5 cents per copy.

Grasshopper Control in Relation to Cereal and Forage Crops. By W. R. Walton, Entomological Assistant, Cereal and Forage Insect Investigations. Pp. 20, figs. 21. Contribution from the Bureau of Entomology. **(Farmers' Bulletin 747.)**

Growing Grain on Southern Idaho Dry Farms. By L. C. Aicher, Assistant Agronomist, Office of Cereal Investigations. Pp. 23, figs. 9. Contribution from the Bureau of Plant Industry. **(Farmers' Bulletin 769.)**

Of especial interest to those engaged in dry-land farming in this State.

Homemade Fireless Cookers and Their Use. Prepared in the Office of the Home Economics. Pp. 16, figs. 5. Contribution from the States Relations Service. December, 1916. **(Farmers' Bulletin 771.)**

Control of the Sugar-Beet Nematode. By Harry B. Shaw, Pathological Inspector, Federal Horticultural Board; formerly Assistant Pathologist, Office of Sugar Plant Investigations. Pp. 19, figs. 6. Contribution from the Bureau of Plant Industry. December, 1916. **(Farmers' Bulletin 772.)**

Corn Growing Under Droughty Conditions. By C. P. Hartley, Physiologist in Charge, and L. L. Zook, Physiologist, Office of Corn Investigations. Pp. 24, figs. 15. Contribution from the Bureau of Plant Industry. December, 1916. **(Farmers' Bulletin 773.)**

Growing Cherries East of the Rocky Mountains. By H. P. Gould, Pomologist in Charge of Fruit-Production Investigations. Pp. 37, figs. 29. Contribution from the Bureau of Plant Industry. December, 1916. **(Farmers' Bulletin 776.)**

Castration of Young Pigs. By Frank G. Ashbrook, Junior Animal Husbandman, Animal Husbandry Division. Pp. 6, fig. 6. Contribution from the Bureau of Animal Industry. **(Farmers' Bulletin 780.)**

Sea Island Cotton. By W. A. Orton, Pathologist in Charge of Cotton and Truck Disease Investigations. Pp. 40, figs. 13. Contribution from the Bureau of Plant Industry. Dec. 30, 1916. **(Farmers' Bulletin 787.)**

DEPARTMENT BULLETINS—TECHNICAL.

☞The publications listed below are technical or scientific treatises or bulletins applying to a special industry or locality. The edition is limited, but they will be furnished free to persons who can use such specialized information as long as the supply lasts. However, to insure prompt receipt, remit price to the Superintendent of Documents.

The Dock False-Worm: An Apple Pest. By E. J. Newcomer, Scientific Assistant, Deciduous Fruit Insect Investigations. Pp. 40, pls. 2, figs. 6. Contribution from the Bureau of Entomology. (Professional Paper.) Dec. 29, 1916. **(Department Bulletin 265.)** Price, 10 cents.

The Production of Sweet-Orange Oil and a New Machine for Peeling Citrus Fruits. Possibility of the Commercial Production of Sweet-Orange Oil from Waste Oranges. By S. C. Hood, Scientific Assistant, and G. A. Russell, Expert, of Office Drug-Plant and Poisonous-Plant Investigations. Pp. 19, figs. 10. Contribution from the Bureau of Plant Industry. Dec. 16, 1916. **(Department Bulletin 399.)** Price, 5 cents.

Lupines as Poisonous Plants. By C. D. Marsh and A. B. Clawson, Physiologists, Drug-Plant and Poisonous-Plant Investigations, Bureau of Plant Industry, and Hadleigh Marsh, Veterinary Inspector, Bureau of Animal Industry. Pp. 45, pls. 4, fig. 1. Contribution from the Bureau of Plant Industry and the Bureau of Animal Industry. (Professional Paper.) Dec. 5, 1916. **(Department Bulletin 405.)** Price, 10 cents.

Convict Labor for Road Work. By J. E. Pennybacker, Chief, Division of Road Economics, and H. S. Fairbank, Highway Engineer, Office of Public Roads and Rural Engineering, and Dr. W. F. Draper, Passed Assistant Surgeon, U. S. Public Health Service. Pp. 218, pls. 14, figs. 10. Contribution from the Office of Public Roads and Rural Engineering. (Professional Paper.) Dec. 15, 1916. **(Department Bulletin 414.)** Price, 40 cents.

Intended for use of State officials in charge of road work. No copies available for free distribution.

Sugar Pine. By Louis T. Larsen, Forest Examiner, and T. D. Woodbury, Assistant District Forester. Pp. 40, pls. 10. Contribution from the Forest Service. (Professional Paper.) Dec. 30, 1916. **(Department Bulletin 426.)** Price, 15 cents.

The Spike-Horned Leaf Miner, An Enemy of Grains and Grasses. By Philip Luginbill and T. D. Urbahns, Entomological Assistants, Cereal and Forage Insect Investigations. Pp. 20, pls. 2, fig. 1. Contribution from the Bureau of Entomology. (Professional Paper.) Dec. 13, 1916. **(Department Bulletin 432.)** Price, 5 cents.

The Pear Leaf-Worm. By R. L. Nougaret, Entomological Assistant, and W. M. Davidson and E. J. Newcomer, Scientific Assistants, Deciduous Fruit Insect Investigations. Pp. 24, pls. 2, figs. 4. Contribution from the Bureau of Entomology. (Professional Paper.) Dec. 11, 1916. **(Department Bulletin 438.)** Price, 5 cents.

The Soy Bean, With Special Reference to Its Utilization for Oil, Cake, and Other Products. By C. V. Piper, Agrostologist in Charge, and W. J. Morse, Scientific Assistant, Forage-Crop Investigations. Pp. 20, figs. 3. Contribution from the Bureau of Plant Industry. Dec. 22, 1916. **(Department Bulletin 439.)** Price, 5 cents.

Improvement of Ghirka Spring Wheat in Yield and Quality. By J. Allen Clark, Scientific Assistant in Western Wheat Investigations, Office of Cereal Investigations. Pp. 20, figs. 17. Contribution from the Bureau of Plant Industry. (Professional Paper.) Dec. 4, 1916. **(Department Bulletin 450.)** Price, 5 cents.

The Chemical Composition of Lime-Sulphur Animal Dips. By Robert M. Chapin, Senior Biochemist, Biochemic Division. Pp. 16. Contribution from the Bureau of Animal Industry. (Professional Paper.) Dec. 14, 1916. **(Department Bulletin 451.)** Price, 5 cents.

The Chemical Composition of American Grapes Grown in the Central and Eastern States. By William B. Alwood, Enological Chemist, in collaboration with B. G. Hartmann, J. R. Eoff, S. F. Sherwood, J. O. Carrero, and T. S. Harding. Pp. 20. Contribution from the Bureau of Chemistry. (Professional Paper.) Dec. 18, 1916. **(Department Bulletin 452.)** Price, 5 cents.

The Effect of Cultural and Climatic Conditions on the Yield and Quality of Peppermint Oil. By Frank Rabak, Chemical Biologist, Drug-Plant and Poisonous-Plant Investigations. Pp. 16. Contribution from the Bureau of Plant Industry. (Professional Paper.) Dec. 9, 1916. **(Department Bulletin 454.)** Price, 5 cents.

The Drying for Milling Purposes of Damp and Garlicky Wheat. By J. H. Cox, Assistant in Charge of the United States Grain-Standardization Laboratory at Baltimore, Md. Pp. 11, figs. 3. Contribution from the Bureau of Plant Industry. (Professional Paper.) Dec. 2, 1916. **(Department Bulletin 455.)** Price, 5 cents.

The Use of Energy Values in the Computation of Rations for Farm Animals. (A Revision of Farmers' Bulletin 346.) By Henry Prentiss Armsby, Director of the Institute of Animal Nutrition of the Pennsylvania State College; Expert in Animal Nutrition, Bureau of Animal Industry. Pp. 31. Contribution from the Bureau of Animal Industry. Dec. 15, 1916. **(Department Bulletin 459.)** Price, 5 cents.

Lessons on Poultry for Rural Schools. By F. E. Heald, Specialist in Agricultural Education. Pp. 34, figs. 13. Contribution from the States Relations Service. (Professional Paper.) Dec. 30, 1916. **(Department Bulletin 464.)** Price, 10 cents.

The Food Value and Uses of Poultry. By Helen W. Atwater, Scientific Assistant, Office of Home Economics. Pp. 29, figs. 2. Contribution from the States Relations Service. (Professional Paper.) Dec. 29, 1916. **(Department Bulletin 467.)** Price, 5 cents.

Fats and Their Economical Use in the Home. By A. D. Holmes and H. L. Lang, Scientific Assistants, Office of Home Economics. Pp. 27. Contribution from the States Relations Service. (Professional Paper.) Dec. 15, 1916. **(Department Bulletin 469.)** Price, 5 cents.

Studies on the Digestibility of the Grain Sorghums. By C. F. Langworthy, Chief, and A. D. Holmes, Scientific Assistant, Office of Home Economics. Pp. 31. Contribution from the States Relations Service. (Professional Paper.) Dec. 22, 1916. **(Department Bulletin 470.)** Price, 5 cents.

The Origin, Characteristics, and Quality of Humpback Wheat. By Levi M. Thomas, Assistant in Charge of the United States Grain-Standardization Laboratory at Fargo, N. Dak. Pp. 4, pl. 1, fig. 1. Contribution from the Bureau of Plant Industry and the Office of Markets and Rural Organization. Dec. 30, 1916. **(Department Bulletin 478.)** Price, 5 cents.

A Survey of Beekeeping in North Carolina. By E. G. Carr, Specialist in Beekeeping. Pp. 16. Contribution from the Bureau of Entomology. Dec. 2, 1916. **(Department Bulletin 489.)** Price, 5 cents.

Table for Converting Weights of Mechanical Separations into Percentages of the Sample Analyzed. By E. G. Boerner, Assistant in Grain Standardization. Pp. 21, figs. 2. Contribution from the Bureau of Plant Industry and the Office of Markets and Rural Organization. Dec. 28, 1916. **(Department Bulletin 516.)** Price, 5 cents.

MISCELLANEOUS.

Report of the Alaska Agricultural Experiment Stations, 1915. Pp. 100, pls. 19. Price, 15 cents.

Phosphate Fertilizers for Hawaiian Soils, and Their Availability. By Wm. T. McGeorge, Former Chemist. Pp. 45, pls. 4. Dec. 2, 1916. **(Bulletin 41, Hawaii Agricultural Experiment Station.)** Price, 10 cents.

Measuring Hay in Ricks or Stacks. By H. B. McClure, Agriculturist, and W. J. Spillman, Chief. Pp. 10, figs. 4. Contribution from the Office of Farm Management, Office of the Secretary. Dec. 9, 1916. **(Circular 67, Office of the Secretary.)** Price, 5 cents.

Improved Apparatus for Use in Making Acidity Determinations of Corn. By H. J. Besley and G. H. Baston, Assistants, Office of Grain Standardization. Pp. 4, fig. 1. Dec. 30, 1916. **(Circular 68, Office of the Secretary.)** Price, 5 cents.

SERIALS.

Journal of Agricultural Research. (For sale only.) Vol. 7, No. 10, Dec. 4, 1916. Contents: Nitrification in Semiarid Soil. (gi Cal.—7.) By W. P. Kelley.—Factors Affecting the Evaporation of Moisture from the Soil. (gi Utah—4.) By F. S. Harris and J. S. Robinson. Pp. 417–461, figs. 17. Price, 10 cents.

Same, Vol. 7, No. 11. Dec. 11, 1916. Contents: Macrosiphum granarium, the English Grain Aphis. (gk K—47.) By W. J. Phillips.—A Specific Mosaic Disease in Nicotiana viscosum Distinct from the Mosaic Disease of Tobacco. (gl G—101.) By H. A. Allard.—Syntomaspis druparum, the Apple-Seed Chalcid. (go K—47.) By R. A. Cushman. Pp. 463–502, pls. 9, figs. 9. Price, 20 cents.

Same, Vol. 7, No. 12. Dec. 18, 1916. Contents: Assimilation of Iron by Rice from Certain Nutrient Solutions. (gm B—12.) By P. L. Gile and J. O. Carrero.—Influence of Bordeaux Mixture on the Rates of Transpiration from Abscised Leaves and from Potted Plants. (gn N. J.—4.) By William H. Martin. Pp. 503–548. Price, 10 cents.

NOTE.—Number 13 of this volume will be the index to the volume (the volumes consisting of 13 numbers in the future instead of 26 numbers, as now issued), and will not be issued for some time owing to that fact.

Same, Vol. 6, No. 26. Contents and Index of Volume 6. April 3, 1916–September 25, 1916. Pp. xxvi–1047–1060. Price, 10 cents.

Experiment Station Record. Vol. XXXV, No. 6. Abstract Number. Dec. 8, 1916. E. W. Allen, Ph. D., Editor. Pp. 501–600. Price, 15 cents.

Same, Vol. XXXV, No. 7. November, 1916. Pp. 601–700. Price, 15 cents.

☞NOTE.—The Record is a technical review of the world's scientific literature pertaining to agriculture. It is not intended for general distribution, and its free distribution is restricted to persons connected with the agricultural colleges, experiment stations, and similar institutions, and to libraries and exchanges. It can not be sent free to individuals having no official connection with public institutions. The Superintendent of Documents will receive subscriptions for this publication, which is issued in two volumes a year, ten numbers each, at $1 a volume.

The Monthly Crop Report. Vol. 2, No. 12. December, 1916. Pp. 121–140. (Bureau of Crop Estimates.)

Contains data relating to agriculture, including estimates of acreage, conditions, yield, prices, and value of crops and live stock, and crop summary for 1916. For free distribution.

SERVICE AND REGULATORY ANNOUNCEMENTS—FOR SALE ONLY.

☞These contain *only* information, instructions, and notices governing the enforcement of food and drugs act, meat inspection, 28-hour and quarantine laws, and the various regulations of the department. Issued monthly by certain bureaus. *Free distribution* is limited to persons in the employ of the department, to public officials whose duties render it necessary for them to have such information, to journals especially concerned, and to manufacturers and firms whose business is affected by same. Others desiring copies are respectfully referred to the Superintendent of Documents, Government Printing Office, who has them for sale *only,* at prices noted.

Bureau of Animal Industry. No. 115. November, 1916. Pp. 97–104. Dec. 26, 1916. Price, 5 cents.

Federal Horticultural Board. No. 34. November, 1916. Pp. 141–151. Dec. 19, 1916. Price, 5 cents.

Office of Markets and Rural Organization. No. 16. Dec. 16, 1916. Pp. 15. Price, 5 cents.

Office of Markets and Rural Organization. No. 17. Pp. 33. Dec. 21, 1916. Price, 5 cents.

SOIL SURVEYS.

☞All requests for soil surveys are referred to the Bureau of Soils for attention, the distribution of same being controlled by that bureau.

Soil Survey of Clay County, Alabama. By Arthur E. Taylor and E. S. Vanatta, of the U. S. Department of Agriculture, and N. Eric Bell and J. L. Andress, of the Alabama Department of Agriculture and Industries. Pp. 41, fig. 1, map. **(From F. O. Soils, 1915.)** Price, 15 cents.

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Soil Survey of the Ukiah Area, California. By E. B. Watson, of the U. S. Department of Agriculture, In Charge, and R. L. Pendleton, of the University of California. Pp. 53, pls. 5, figs. 2, map. **(From F. O. Soils, 1914.)** Price, 15 cents.

Soil Survey of Washington County, Georgia. By R. A. Winston, In Charge, J. H. Agee, J. A. Kerr, and M. Earl Carr. Pp. 39, fig. 1, map. **(From F. O. Soils, 1915.)** Price, 15 cents.

Soil Survey of Wilkes County, Georgia. By David D. Long, of the Georgia State College of Agriculture. Pp. 35, fig. 1, map. **(From F. O. Soils, 1915.)** Price, 15 cents.

Soil Survey of Coahoma County, Mississippi. By F. Z. Hutton, In Charge, W. E. Tharp, N. M. Kirk, and H. W. Hawker, of the U. S. Department of Agriculture, and E. M. Jones, of the Mississippi Geological Survey. Pp. 29, fig. 1, map. **(From F. O. Soils, 1915.)** Price, 15 cents.

PUBLICATIONS OF THE WEATHER BUREAU.

☞Publications of the Weather Bureau are obtainable only from the Chief of the Weather Bureau or the Superintendent of Documents, Government Printing Office, at the prices noted herein.

Monthly Weather Review. (For sale only.) Vol. 44, No. 9. September, 1916. Dec. 1, 1916. Pp. 499–545, charts 10, figs. 6. Price, 25 cents per copy, $2.50 a year. Payable to the Superintendent of Documents.

Special Articles: Solar and sky radiation measurements during September, 1916. By H. H. Kimball.—Shading effect of wire insect cages. By H. H. Kimball.—Circumzenithal arc with black band. By H. H. Martin.—Atmospheric electrical variations at sunset and sunrise. By E. H. Nichols.—Ionization of the upper atmosphere. By W. F. G. Swann.—Ground rainbows. By A. E. Heath.—Temperature and radiation of the sun. By F. Biscoe.—Solar corpuscular rays. By K. Birkeland.—Aurora of September 30, 1916.—Probable growing season. By W. G. Reed.—Certain characteristics of the winds at Mount Tamalpais. By H. H. Wright.—Newtonian constant of gravitation as affected by temperature. By P. E. Shaw.—Kata thermometer as a measure of the effects of atmospheric conditions on bodily comfort. By C. E. A. Winslow.—Ball lightning on Puy de Dôme. By E. Mathias.

Monthly Weather Review. (For sale only.) Supplement No. 3. Aerology No. 1. Dec. 1, 1916. Pp. 67, figs. 23. Price, 25 cents.

Special Articles: Sounding Balloon Ascensions at Fort Omaha, Nebr., May 8, 1915.—Meteorological Observations on Board the U. S. C. G. Cutter "Seneca," April–July, 1915.—Drexel Aerological Station.—Free-Air Data at Drexel Aerological Station, October, November, and December, 1915.

Climatological Data for the United States by sections. Vol. 3, No. 10. October, 1916. Pp. 220, maps, 2. 4°. Price, 35 cents, $4.00 a year.

National Weather and Crop Bulletin, No. 31, November, 1916, reporting temperature, rainfall, and crop conditions throughout the United States. (Issued weekly, on Wednesday, April to October; monthly remainder of year.) Price, 25 cents a year.

Snow and Ice Bulletins for Dec. 5, 12, 19, 26, 1916. These bulletins are issued weekly during the winter season, based upon data from regular Weather Bureau stations, supplemented by reports from selected cooperative observers. Price, 25 cents a year.

JOS. A. ARNOLD,
Editor and Chief, Division of Publications.

WASHINGTON: GOVERNMENT PRINTING OFFICE: 1917